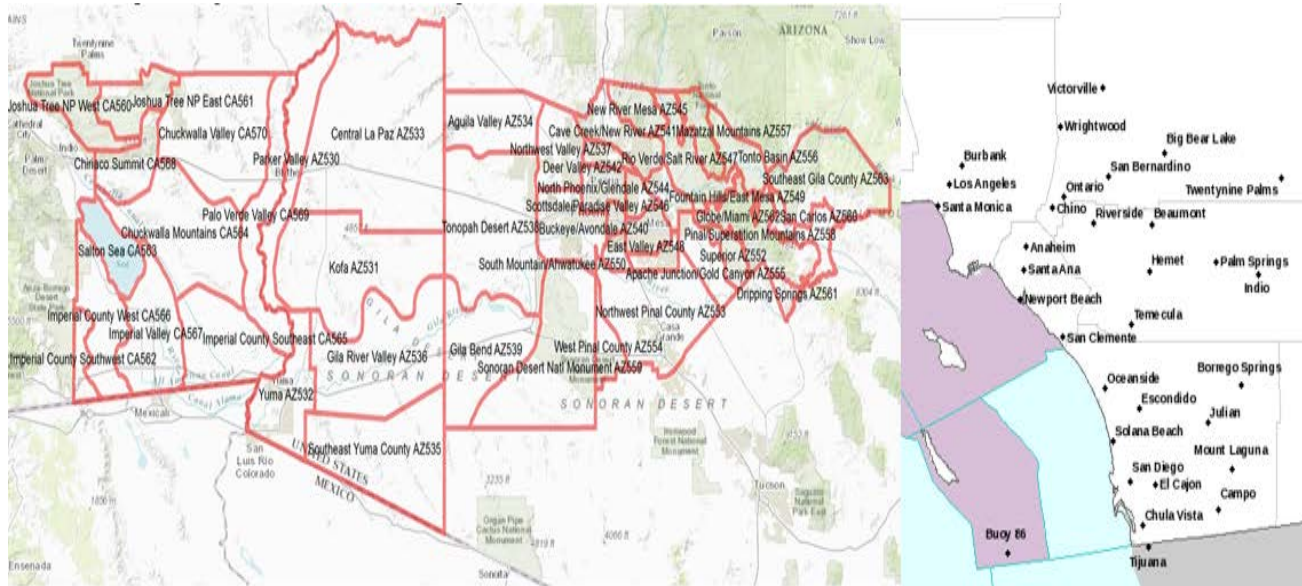


FIGURE A-1
NATIONAL WEATHER SERVICE PUBLIC ZONES



88

FIGURE A-2
THUNDERSTORM ACTIVITY BRINGS OUTFLOW WINDS

Area Forecast Discussion

National Weather Service Phoenix AZ

347 AM MST FRI JUL 29 2016

.SYNOPSIS...

Very hot weather will continue today before a much more humid airmass moves into the Desert Southwest this weekend, causing a drop in temperatures. There will be a marked increase in thunderstorm activity over the deserts beginning tonight and continuing into next week. Saturday evening bears close watching for strong to severe thunderstorms, mainly across southern Arizona.

.DISCUSSION...

Today...

Sonoran MCS has weakened considerably but outflow winds have started moving into the Lower Colorado River Valley per 10Z METAR from NYL. All of the models indicate an increase in moisture today (compared to Thursday) and thus a significant increase in CAPE. Hi-res models reflect this with more convection over the higher terrain of Arizona. However, with the main 500 mb anticyclone becoming centered over Arizona, there will still be CIN to contend with. This is also reflected in the model output with less storm coverage over the lower elevations - but more than we had Thursday. We will have storms that will be efficient wind producers and thus large swaths of the desert will experience outflow winds. Even though the steering flow is primarily easterly (and thus not a classic dust-storm orientation), inserted mention of blowing dust this evening over the south-central and southwest Arizona deserts plus some of the southeast California deserts.

Saturday and Sunday...

Deep moisture really arrives over the weekend as an inverted trough reaches the west coast of Mexico. Accordingly, PoPs go up significantly. Thinking is that Friday activity will not stabilize things a whole lot. Thus Saturday is shaping up to be a big day with potential for widespread storm activity. If that pans out, then Sunday will not be as active over south-central AZ but more so over southwest AZ and southeast CA.

Fig. A-2: By early morning on July 29 the NWS was predicting thunderstorms over the desert areas due to a mesoscale convective system moving out of northern Mexico and increasing atmospheric instability and convective potential. Source: Iowa State Environmental Mesonet; AFD from NWS PSR;
<https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDPSR&e=201607291047>.

FIGURE A-3
MONSOONAL WEATHER TO BRING STRONG WINDS AND BLOWING DUST

Weekend Outlook

...Increasing Thunderstorm Chances Today Through Sunday...

Summary	Impacts
Atmospheric moisture will be on the increase today into the weekend. That means an upswing in thunderstorm activity and the associated hazards.	<ul style="list-style-type: none"> • Very strong winds, blowing dust • Heavy rains with flooding • Much cooler high temperatures

Pull Aside, Stay Alive

NWS Phoenix

When Thunder Roars Go Indoors

Chris Frailey

Turn Around Don't Drown

Weather Forecast Office
Phoenix, AZ
7/29/2016 5:53 am MST

Follow Us:

weather.gov/Phoenix

Atmospheric moisture will increase today into the weekend. This will mean a major uptrend in thunderstorm activity and chances for rain. With the thunderstorms come the associated hazards including lightning, very strong winds, blowing dust, and localized flash flooding. For today (Friday), the main impact will be strong winds and areas of blowing dust. Over the weekend, there will be better storm coverage and better chances for rain - expanding from Arizona into southeast California. The strongest storms will produce localized flash flooding. Keep close tabs on the forecast and keep an eye to the sky!

Fig. A-3: A Weather Story issued July 29 forecasted that monsoonal weather was expected to bring gusty winds and blowing dust to southeastern California and portions of Arizona. Source: NWS Phoenix.

90

FIGURE A-4
MONSOONAL WEATHER EXPECTED

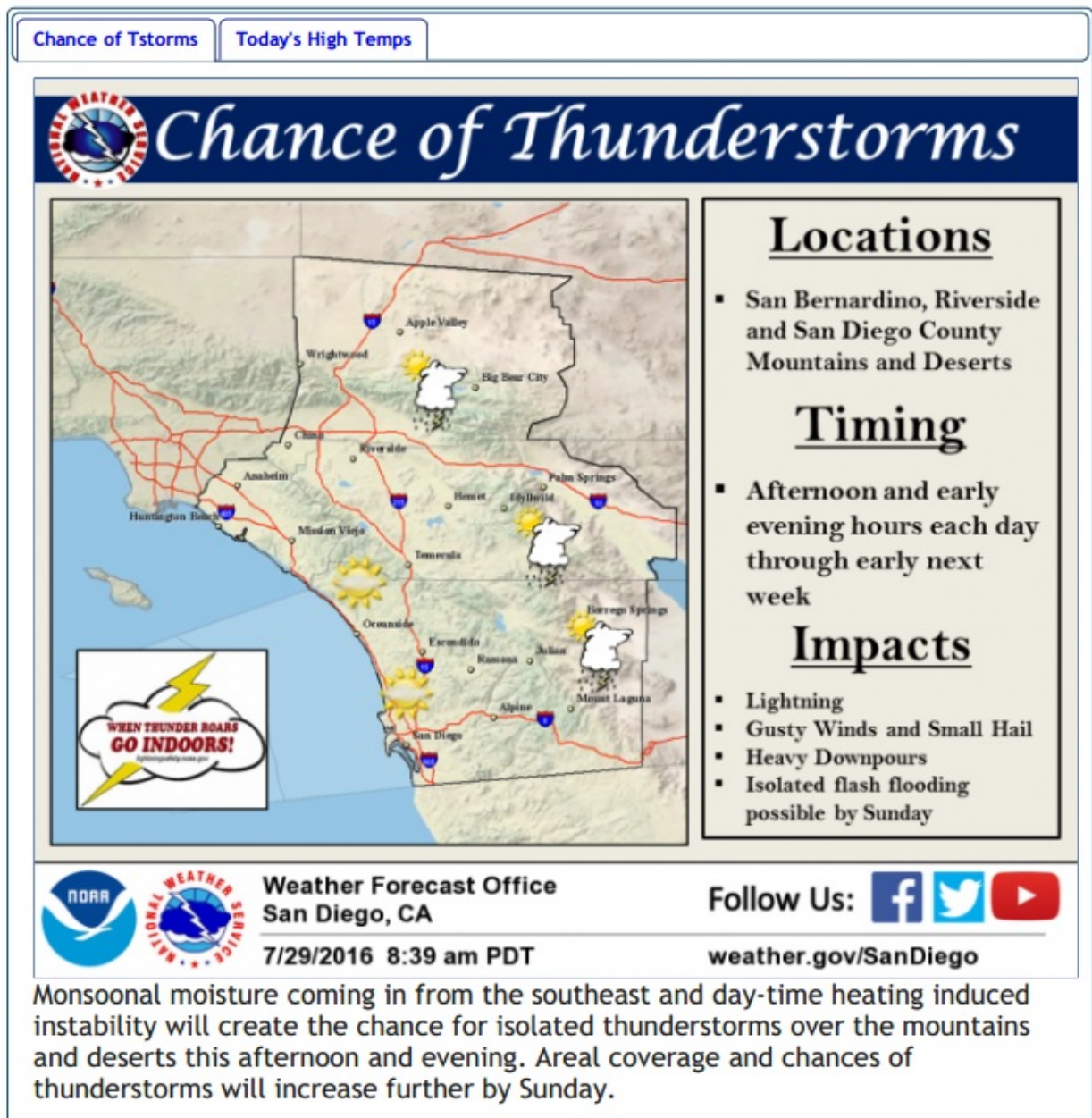


Fig. A-4: A Weather Story issued July 29 forecasted that monsoonal weather was expected to bring gusty winds to the mountains and deserts of San Diego County. Source: NWS San Diego.

FIGURE A-5
BLOWING DUST ADVISORY FOR LARGE AREA OF ARIZONA

Your Severe Weather Watches and Warnings

Yuma, AZ
[Your Radar](#) | [Current Conditions](#) | [15-Day Forecast](#)

URGENT - WEATHER MESSAGE
 NATIONAL WEATHER SERVICE PHOENIX AZ
 938 AM MST FRI JUL 29 2016

...DENSE BLOWING DUST POSSIBLE...
 ...BLOWING DUST ADVISORY IN EFFECT FROM 5 PM THIS AFTERNOON
 TO
 8 PM MST THIS EVENING...

THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
 BLOWING DUST
 ADVISORY...WHICH IS IN EFFECT FROM 5 PM THIS AFTERNOON TO 8
 PM
 MST THIS EVENING.

* AFFECTED AREA...MUCH OF SOUTH-CENTRAL ARIZONA INCLUDING
 THE
 INTERSTATE 10 AND INTERSTATE 8 CORRIDORS FROM PHOENIX TO
 CASA
 GRANDE AND GILA BEND.

* TIMING...LATE THIS AFTERNOON THROUGH PINAL COUNTY
 SPREADING NORTH
 AND WEST THROUGH PHOENIX DURING THE EARLY EVENING.

* WINDS...GUSTS OVER 40 MPH LIKELY.

* VISIBILITY...BELOW 1 MILE WILL BE COMMON.

* IMPACTS...HAZARDOUS DRIVING CONDITIONS FROM WIDESPREAD
 BLOWING DUST
 REDUCING VISIBILITY BELOW 1 MILE. LOCAL DENSE BLOWING DUST IS
 ALSO
 POSSIBLE.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

BE READY FOR A SUDDEN DROP IN VISIBILITY. IF YOU ENCOUNTER
 BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT
 APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT
 YOUR
 VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP
 YOUR
 FOOT OFF THE BRAKE PEDAL.

REMEMBER...PULL ASIDE...STAY ALIVE.

Fig. A-5: The gusty associated with the monsoonal system impacted a wide area from southeastern California into southwestern Arizona near Gila Bend. A Blowing Dust Advisory was issued on July 29 for the Gila Bend area. Dust lofted from outflow winds from thunderstorms drifting over the region lofted dust into the atmosphere where some of it eventually was transported into Imperial County. Source: AccuWeather.

FIGURE A-6 OUTFLOW WINDS BRINGING DENSE BLOWING DUST

Area Forecast Discussion...Updated
National Weather Service Phoenix AZ
1050 AM MST FRI JUL 29 2016
.UPDATE...Updated Aviation Discussion...
.SYNOPSIS...
Very hot weather will continue today before a much more humid airmass moves into the Desert Southwest this weekend, causing a drop in temperatures. There will be a marked increase in thunderstorm activity over the deserts beginning tonight and continuing into next week. Saturday evening bears close watching for strong to severe thunderstorms, mainly across southern Arizona.
.DISCUSSION...
Conditions are evolving toward a very active, high impact weather situation across central Arizona this evening. Regional objective analysis shows the H5 anti-cyclone gradually weakening and shifting east towards the four corners. Per WV imagery, there appears to be a subtle wave on the eastern periphery of this midtropospheric high pressure over west central NM, and visible imagery shows rapid manifestation of midlevel clouds in response to this feature (and possibly a gravity wave as well). Given these features, its not surprising that modest cooling and moistening of the middle atmosphere is forecast for the remainder of the day.
12Z KTCW and KPSR sounding data showing improving sfc-H5 12-13 g/kg mixing ratios, though KPSR still shows a troublesome drop off to 6 g/kg in the 700-600mb top of the mixing layer. KTCW moisture in this critical layer was much better at 8 g/kg, and forecast soundings for early this evening depict a notable moisture increase aloft (whether synoptically or by deep outflow processes). NCAR and SSE0 ensemble output along with almost every local high resolution model resoundingly suggests intense outflow winds/boundaries developing from high terrain convection propagating towards lower elevations. Deep outflow boundaries (and numerous collisions) should be sufficient to spur additional convection helping re-enforce strong surface winds leading to expansive dense blowing dust. Given the relatively high confidence, have issued a blowing dust advisory as a watch type product leading into this presumptive large event. Have boosted POPs slightly as well feeling outflow boundaries combined with terrain features scattered through Valley locations will be deep enough to locally allow for MUCape nearing 1500 J/kg to be released. Large T/Td spreads along with steep midlevel lapse rates would support isolated svr wx should this evolution come to fruition.

Fig. A-6: The NWS Phoenix office forecasted outflow winds developing over higher terrain and moving down slope to the lower elevations, along with blowing dust in the region. Source: Iowa State Environmental Mesonet; AFD from NWS PSR; <https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDPSR&e=201607291750>.

FIGURE A-7
BLOWING DUST ADVISORY FOR YUMA COUNTY AREA

Your Severe Weather Watches and Warnings

Yuma, AZ
[Your Radar](#) | [Current Conditions](#) | [15-Day Forecast](#)

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE PHOENIX AZ
528 PM MST FRI JUL 29 2016

...DENSE BLOWING DUST POSSIBLE...
...BLOWING DUST ADVISORY IN EFFECT UNTIL 10 PM MST THIS EVENING...

THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A BLOWING DUST ADVISORY...WHICH IS IN EFFECT UNTIL 10 PM MST THIS EVENING.

* AFFECTED AREA...MUCH OF NORTHERN MARICOPA AND YUMA COUNTIES...INCLUDING THE PHOENIX AREA.

* TIMING...LATER THIS EVENING.

* WINDS...GUSTS OVER 40 MPH LIKELY.

* VISIBILITY...BELOW 1 MILE WILL BE COMMON.

* IMPACTS...HAZARDOUS DRIVING CONDITIONS FROM WIDESPREAD BLOWING DUST REDUCING VISIBILITY BELOW 1 MILE. LOCAL DENSE BLOWING DUST IS ALSO POSSIBLE.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

BE READY FOR A SUDDEN DROP IN VISIBILITY. IF YOU ENCOUNTER BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT YOUR VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP YOUR FOOT OFF THE BRAKE PEDAL.

REMEMBER...PULL ASIDE...STAY ALIVE.

Fig. A-7: At 5:28 p.m. a Blowing Dust Advisory was issued for Maricopa and Yuma counties in Arizona. Source: Accuweather.

FIGURE A-8
BLOWING DUST ADVISORY FOR YUMA COUNTY EXTENDED

Your Severe Weather Watches and Warnings

Yuma, AZ
[Your Radar](#) | [Current Conditions](#) | [15-Day Forecast](#)
URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE PHOENIX AZ
932 PM MST FRI JUL 29 2016
...BLOWING DUST ADVISORY NOW IN EFFECT UNTIL 11 PM MST THIS EVENING...

* AFFECTED AREA...PORTIONS OF YUMA COUNTY.

* TIMING...LATER THIS EVENING.

* WINDS...GUSTS OVER 40 MPH LIKELY.

* VISIBILITY...BELOW 1 MILE WILL BE COMMON.

* IMPACTS...HAZARDOUS DRIVING CONDITIONS FROM WIDESPREAD BLOWING DUST REDUCING VISIBILITY BELOW 1 MILE. LOCAL DENSE BLOWING DUST IS ALSO POSSIBLE.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

BE READY FOR A SUDDEN DROP IN VISIBILITY. IF YOU ENCOUNTER BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT YOUR VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP YOUR FOOT OFF THE BRAKE PEDAL.

REMEMBER...PULL ASIDE...STAY ALIVE.

Fig. A-8: A Blowing Dust Advisory for portions of Yuma County was extended until 11 p.m. The Yuma area was upstream of Imperial County during the July 30 event. Source: AccuWeather.

FIGURE A-9
DUST STORM WARNING ISSUED

Your Severe Weather Watches and Warnings

Yuma, AZ

[Your Radar](#) | [Current Conditions](#) | [15-Day Forecast](#)

URGENT - WEATHER MESSAGE

NATIONAL WEATHER SERVICE PHOENIX AZ

1058 PM MST FRI JUL 29 2016

...DUST STORM WARNING NOW IN EFFECT UNTIL MIDNIGHT MST
TONIGHT...

* AFFECTED AREA...SOUTHWESTERN ARIZONA.

* TIMING...THROUGH MIDNIGHT.

* WINDS...AS HIGH AS 50 MPH.

* VISIBILITY...AS LOW AS ONE QUARTER OF A MILE.

* IMPACTS...HAZARDOUS DRIVING CONDITIONS FROM WIDESPREAD
BLOWING
DUST REDUCING VISIBILITY BELOW ONE QUARTER OF A MILE.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

BE READY FOR A SUDDEN DROP IN VISIBILITY TO NEAR ZERO. IF YOU
ENCOUNTER BLOWING DUST OR BLOWING SAND ON THE ROADWAY
OR SEE IT
APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT
YOUR
VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP
YOUR
FOOT OFF THE BRAKE PEDAL.

REMEMBER...PULL ASIDE...STAY ALIVE.

Fig. A-9: A Dust Storm Warning for southwestern Arizona forecasted dense dust being lofted by gusts reaching 50 mph. Dust lofted by these winds would have been upstream from Imperial County during the July 30 wind event. Source: AccuWeather.

FIGURE A-10
STRONG WINDS TRACKED OVER IMPERIAL COUNTY

Your Severe Weather Watches and Warnings

El Centro, CA

[Your Radar](#) | [Current Conditions](#) | [15-Day Forecast](#)

SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
1125 PM PDT FRI JUL 29 2016
...SIGNIFICANT WEATHER ADVISORY...

THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
SIGNIFICANT WEATHER ADVISORY FOR...
EASTERN IMPERIAL AND SOUTHEASTERN RIVERSIDE COUNTIES
UNTIL 1245 AM PDT

AT 1121 PM PDT...DOPPLER RADAR WAS TRACKING STRONG WINDS
FROM
DISTANT THUNDERSTORMS HEADED TOWARD IMPERIAL AND
EASTERN RIVERSIDE
COUNTY. THESE WINDS FROM ARIZONA ARE CARRYING DENSE
BLOWING DUST AND
WILL CAUSE VISIBILITIES TO DROP SUDDENLY...DIPPING BELOW 1
MILE IN
SOME SPOTS.

LOCATIONS IMPACTED INCLUDE...
INTERSTATE 8 BETWEEN YUMA AND EL CENTRO...
INTERSTATE 10 BETWEEN BLYTHE AND CHIRIACO SUMMIT.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

LOCALLY DENSE BLOWING DUST IS POSSIBLE. IF YOU ENCOUNTER
BLOWING
DUST WHILE DRIVING...PULL OVER AS FAR OFF THE ROADWAY AS
POSSIBLE
AND PARK. TURN OFF YOUR LIGHTS AND KEEP YOUR FOOT OFF THE
BRAKE.

PULL ASIDE AND STAY ALIVE.

Fig. A-10: A Significant Weather Advisory for Imperial County was issued due to Doppler radar tracking strong winds from thunderstorms that were carrying dense dust. Source: AccuWeather.

FIGURE A-11 BLOWING DUST FOR A WIDE AREA

YUMA/MARTINEZ LAKE AND VICINITY-

INCLUDING THE CITIES OF...FORTUNA FOOTHILLS...SAN LUIS...SOMERTON...YUMA
1159 PM MST FRI JUL 29 2016

...DUST STORM WARNING IN EFFECT UNTIL MIDNIGHT MST TONIGHT...PATCHY BLOWING DUST THROUGH THE NIGHT.SOUTHEAST WIND 10 TO 20 MPH. GUSTS UP TO 30 MPH

LOWER COLORADO RIVER VALLEY AZ-LOWER COLORADO RIVER VALLEY CA-

INCLUDING THE CITIES OF...EHRENBERG...PARKER...BLYTHE

1159 PM MST FRI JUL 29 2016 /1159 PM PDT FRI JUL 29 2016/

...DUST STORM WARNING IN EFFECT UNTIL MIDNIGHT MST /MIDNIGHT PDT/
TONIGHT.... PATCHY BLOWING DUST AFTER MIDNIGHT.

WEST CENTRAL DESERTS-

INCLUDING THE CITIES OF...BOUSE...QUARTZSITE...SALOME

1159 PM MST FRI JUL 29 2016

...DUST STORM WARNING IN EFFECT UNTIL MIDNIGHT MST TONIGHT...PATCHY BLOWING DUST IN THE EVENING

SOUTHWEST DESERTS-

INCLUDING THE CITIES OF...DATELAND...TACNA...WELLTON

1159 PM MST FRI JUL 29 2016

...DUST STORM WARNING IN EFFECT UNTIL MIDNIGHT MST TONIGHT...PATCHY BLOWING DUST IN THE EVENING.

SOUTHWEST MARICOPA COUNTY-

INCLUDING THE CITY OF...GILA BEND

1159 PM MST FRI JUL 29 2016

.TONIGHT...AREAS OF BLOWING DUST IN THE EVENING

RIVERSIDE COUNTY/EASTERN DESERTS-

INCLUDING THE CITIES OF...CHIRIACO SUMMIT...DESERT CENTER...

EAGLE MOUNTAIN

1159 PM PDT FRI JUL 29 2016

...DUST STORM WARNING IN EFFECT UNTIL 2 AM PDT SATURDAY...PATCHY BLOWING DUST AFTER MIDNIGHT. SOUTHWEST WIND 10 TO 20 MPH IN THE EVENING BECOMING SOUTH 20 TO 30 MPH AFTER MIDNIGHT. GUSTS UP TO 40 MPH AFTER MIDNIGHT.

IMPERIAL COUNTY-

INCLUDING THE CITIES OF...BRAWLEY...CALEXICO...EL CENTRO...GLAMIS...

IMPERIAL...THE SALTON SEA

1159 PM PDT FRI JUL 29 2016

...DUST STORM WARNING IN EFFECT UNTIL 2 AM PDT SATURDAY...
.TONIGHT...MOSTLY CLEAR IN THE EVENING...THEN PARTLY CLOUDY WITH A SLIGHT CHANCE OF SHOWERS AND THUNDERSTORMS AFTER MIDNIGHT. PATCHY
BLOWING DUST AFTER MIDNIGHT.

Fig. A-11: Excerpts taken from Zone Forecasts issued by the NWS Phoenix office show that blowing dust was expected over a wide area. Source: NWS Phoenix; <http://www.wrh.noaa.gov/psr/redirect.php?pil=phxfppsr&wfo=psr>.

FIGURE A-12
DUST STORM WARNING ALERT

Message: NOAA-NWS-ALERTS-
CA125609277D1C.DustStormWarning.12560927CA10CA.PSRNPWPSR.0ae7a54a5fcd35dbdaf5828538ca9842
from w-nws.webmaster@noaa.gov

Sent: 00:03 PDT on 07-30-2016

Effective: 00:03 PDT on 07-30-2016

Expires: 02:00 PDT on 07-30-2016

Event: Dust Storm Warning

Alert:

...DUST STORM WARNING IN EFFECT UNTIL 2 AM PDT SATURDAY...

THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A DUST STORM WARNING...WHICH IS IN EFFECT UNTIL 2 AM PDT SATURDAY.

* AFFECTED AREA...FAR SOUTHEAST CALIFORNIA INCLUDING IMPERIAL COUNTY AND EASTERN RIVERSIDE COUNTY.

* TIMING...2 AM PDT.

* WINDS...GUSTS TO AS HIGH AS 45 MPH.

* VISIBILITY...BELOW ONE QUARTER OF A MILE.

* IMPACTS...HAZARDOUS DRIVING CONDITIONS FROM WIDESPREAD BLOWING DUST REDUCING VISIBILITY BELOW ONE QUARTER OF A MILE. AFFECTED ROADWAYS INCLUDE INTERSTATE 8...INTERSTATE 10...AND HIGHWAY 78.

Instructions: BE READY FOR A SUDDEN DROP IN VISIBILITY TO NEAR ZERO. IF YOU ENCOUNTER BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT YOUR VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP YOUR FOOT OFF THE BRAKE PEDAL. REMEMBER...PULL ASIDE...STAY ALIVE.

Target Area: Imperial County
Riverside County, Eastern Deserts

Forecast Office: NWS Phoenix (Central Arizona and California Desert)

Fig. A-12: A Dust Storm Warning alert was issued at 00:03 on July 30 for southeastern California. Affected areas included Imperial County. Visibility was expected to drop below $\frac{1}{4}$ mile due to blowing dust. Source: NWS Phoenix.

FIGURE A-13
DUST STORM REPORTED

Storm Events Database

Event Details:

Event	Dust Storm
State	CALIFORNIA
County/Area	LOWER COLORADO RIVER VALLEY
WFO	PSR
Report Source	Trained Spotter
NCEI Data Source	CSV
Begin Date	2016-07-30 00:01:00.0 MST-7
End Date	2016-07-30 01:00:00.0 MST-7
Deaths Direct/Indirect	0/0 (fatality details below, when available...)
Injuries Direct/Indirect	0/0
Property Damage	0.00K
Crop Damage	0.00K
Episode Narrative	Persistent gusty outflow winds triggered by earlier convection across portions of western Arizona moved across the lower Colorado River valley shortly after midnight and into the early morning hours on July 30th. The gusty winds, in excess of 40 mph at times, stirred up significant amounts of dense blowing dust and sand, sufficient to create dust storm conditions. Trained weather spotters near the town of Blythe California reported visibility down to one quarter of a mile shortly after midnight. No accidents or injuries were reported due to the dense blowing dust.
Event Narrative	Gusty outflow winds, triggered by convection that occurred earlier in the night over western Arizona, moved through the lower Colorado River valley early in the morning hours on July 30th. The winds, gusting in excess of 40 mph at times, stirred up dense amounts of blowing dust and sand and created dust storm conditions that affected locations such as Blythe California. At 0011MST, a trained weather spotter 1 mile northwest of Blythe reported visibility down to one quarter of a mile in a dust storm. A Dust Storm Warning was not in effect at the time of the report.

All events for this episode:

Location	County/Zone	St.	Date	Time	I.Z.	Type	Mag	Dth	Inj	PrD	CrD
Totals:								0	0	0.00K	0.00K
LOWER COLORADO RIVER VALLEY (Z...	LOWER COLORADO RIVER VALLEY (Z...	CA	07/30/2016	00:01	MST-7	Dust Storm		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K



Fig. A-13: A Dust Storm was reported by a trained spotter. Source: <https://www.ncdc.noaa.gov/stormevents/eventdetails.jsp?id=646271>.

FIGURE A-14
MONSOONAL WEATHER TO BRING STRONG WINDS AND BLOWING DUST

Active Pattern

...Active Monsoon Pattern....


Very moist air will keep storm chances going through the weekend and next week.
Storms will be capable of producing localized flooding. Potential for strong winds as well.



NWS Mike Olbinski



Weather Forecast Office
Phoenix, AZ
7/30/2016 6:20 am MST

Follow Us:   
weather.gov/Phoenix

A very moist airmass will be in place over the Desert Southwest the next several days. This means above average thunderstorm chances and all of the associated hazards. There will be very large day to day fluctuations in storm coverage. For this weekend, the most likely hazard will be heavy rain and localized flooding.

Fig. A-14: A Weather Story issued July 30 forecasted that monsoonal weather was expected to bring active weather to the desert southwest. Source: NWS Phoenix.

FIGURE A-15
MONSOONAL WEATHER TO BRING STRONG WINDS AND BLOWING DUST

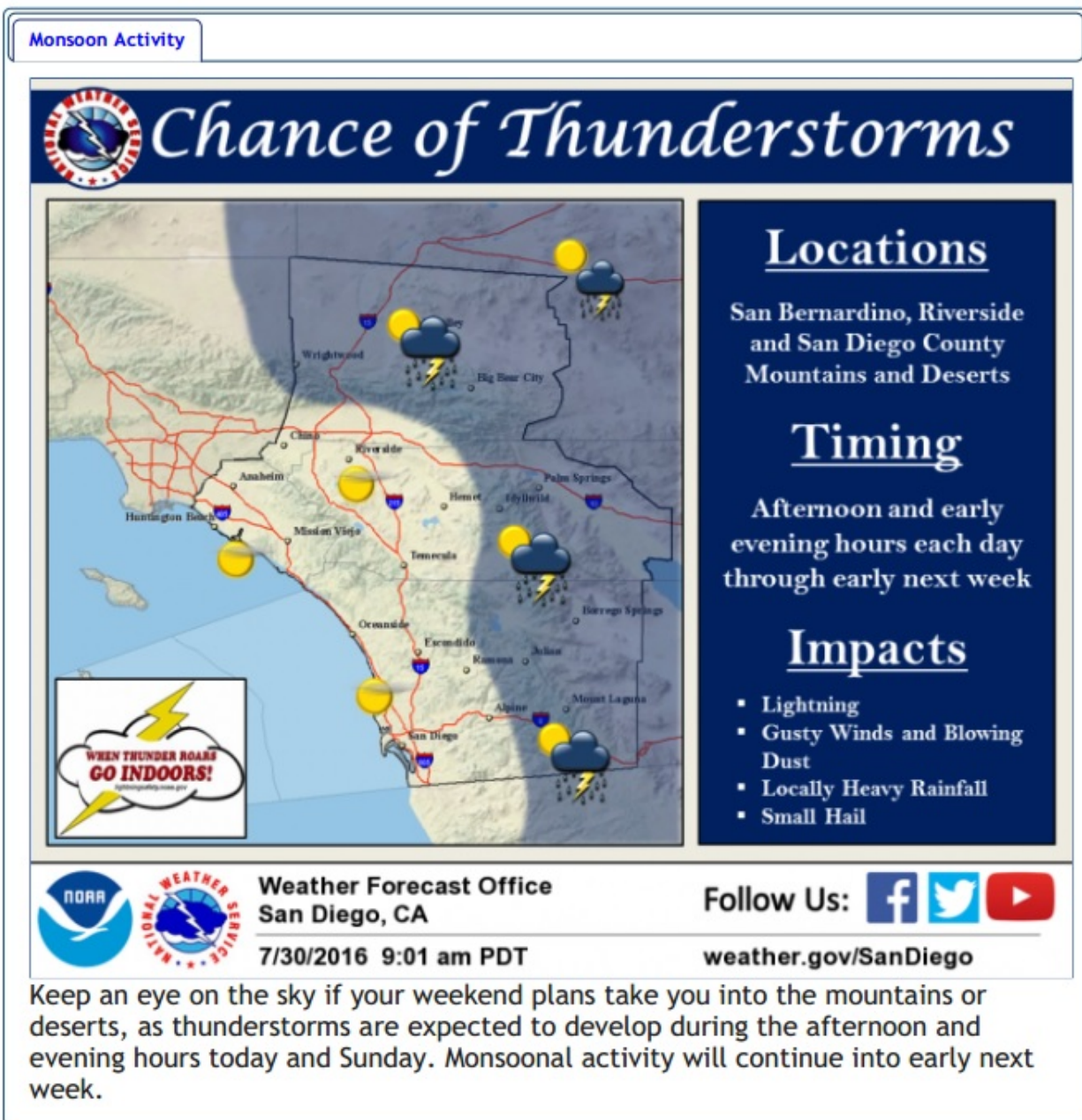


Fig. A-15: A Weather Story issued July 30 forecasted that monsoonal weather was expected to bring gusty winds and blowing dust as far west as the San Diego mountains and deserts. Source: NWS San Diego.

FIGURE A-16
MONSOONAL WEATHER BROUGHT STRONG WINDS AND BLOWING DUST

Area Forecast Discussion

National Weather Service Phoenix AZ

840 AM MST SAT JUL 30 2016

.SYNOPSIS...

A humid airmass will be in place over the Desert Southwest this weekend and much of next week. The moisture availability, as well as some weather disturbances, will make for an active period of weather over the region. All typical hazards associated with the monsoon season including strong damaging winds, blowing dust, lightning, and localized flooding will be in play.

.DISCUSSION...

After all the activity that we saw yesterday/last night, including a very long-lived outflow boundary that produced dense blowing dust over almost all of our cwa and widespread severe weather across south-central AZ, this morning is much quieter. All that remains of yesterday's storm activity is an area of light showers over the lower Colorado River Valley this morning at this hour. These showers are slowly weakening, and will likely dissipate completely within the next 1-2 hours. As far as the forecast for the remainder of this morning and into the early afternoon, considerable debris cloudiness will likely inhibit daytime heating, especially across SW AZ and SE CA and delay the start of any new convection across our cwa. Thus, have decided to reduce pops down into the slight chance range across most of our lower deserts and lowered forecast highs a bit across SW AZ and SE CA. Other than these changes, inherited forecasts are looking ok.

Fig. A-16: The monsoonal system brought gusty winds and blowing dust to a wide area of the Phoenix County Warning Area (CWA). Imperial County is included in the CWA.

Source:

http://www.wrh.noaa.gov/total_forecast/getprod.php?prod=XXXAFDPSR&wfo=PSR 2/3.

**FIGURE A-17
AIR QUALERT FOR BRAWLEY**

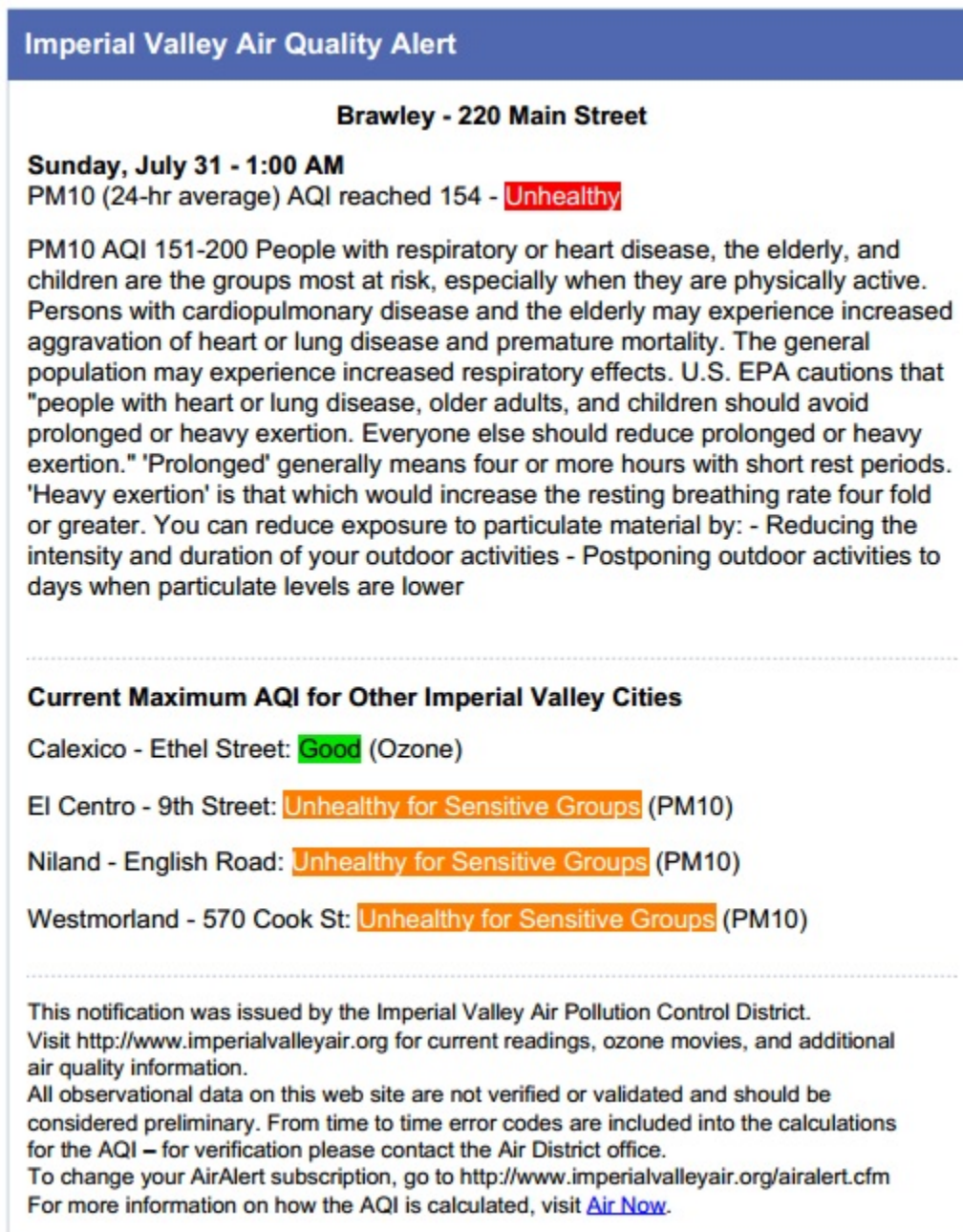


Fig. A-17 So much dust was stirred up that at 1 .m. on July 31 air quality in Brawley stood at Unhealthy. Source: ICAPCD Archives.

**FIGURE A-18
AIR QUALITY INDEX**

Air Quality Index Levels of Health Concern	Numerical Value	Meaning
Good	0 to 50	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate	51 to 100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151 to 200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201 to 300	Health alert: everyone may experience more serious health effects.
Hazardous	301 to 500	Health warnings of emergency conditions. The entire population is more likely to be affected.

Fig. A-18: The Air Quality Index The AQI is an index for reporting daily air quality. It tells you how clean or polluted your air is, and what associated health effects might be a concern for you. The AQI focuses on health effects you may experience within a few hours or days after breathing polluted air. EPA calculates the AQI for five major air pollutants regulated by the Clean Air Act: ground-level ozone, particle pollution (also known as particulate matter), carbon monoxide, sulfur dioxide, and nitrogen dioxide. For each of these pollutants, EPA has established national air quality standards to protect public health. Ground-level ozone and airborne particles are the two pollutants that pose the greatest threat to human health in this country. Source: <https://airnow.gov/index.cfm?action=aqibasics.aqi>.

FIGURE A-19
IMPERIAL COUNTY ISSUED NO BURN DAY

Imperial County Air Pollution Control District
Daily Weather and Ag. Burning Information

Date: Saturday July 30, 2016

Yesterday's Weather Observations at Imperial Airport (ASOS) FAA/NWS

LOCAL TIME	TEMP °F	WINDS MILES PER HOUR	VISIBILITY MILES
7 AM	88	ESE 9	10
8 AM	91	SE 7	10
9 AM	93	NNW 3	10
10 AM	97	NW 5	10
11 AM	102	ENE 6	10
NOON	102	-	10
1 PM	106	S 7	10
2 PM	111	SSE 6	10
3 PM	111	SE 8	10
4 PM	113	SE 13	10
5 PM	111	ESE 16	10
6 PM	109	SE 17	10
7 PM	108	SE 14	10

Max. Temperature yesterday was 113 degrees

Today's Mt. Signal Visibility at 7:30 AM Hazy NKX 12Z 500 MB Height _____
1Y7 12Z 500 MB Height _____

Forecasts
High Today 105-110

Local Forecast (Issued 8 AM Local)	Computer Forecast (RUC 40KM 12Z)
Est. Time Mixing Height reaches 3000 feet _____	10:00 am _____
Forecast of Maximum Mixing Height _____ feet	7215 feet
Forecast for Morning surface winds <u>SE 10-20</u> mph	<u>SE 10-20</u> mph
Forecast for afternoon surface winds <u>SE 10-20</u> mph	<u>SE 10-20</u> mph
Forecast for evening surface winds <u>SE 10-20</u> mph	
Forecast 10 AM - 3 PM transport winds <u>12-13</u> mph	

Comments/Complaints: NO BURN!! Air quality no suitable to burn.

Burn Hours _____ ARB No Burn Day _____ District called No Burn Day _____

Total actually burned today _____ acres Crops burned _____

IMPERIAL COUNTY AIR POLLUTION CONTROL DISTRICT 2011 Int WB

Fig. A-19: A copy of the Imperial County Air Pollution Control District official record of the conditions as they existed for a determination of a "No Burn" day on July 30, 2016.

FIGURE A-20
IMPERIAL COUNTY AFFIDAVIT OF 30 DAY PUBLIC NOTICE


<p>AFFIDAVIT OF PUBLICATION (2015.5 C.C.P.)</p> <p align="center">STATE OF CALIFORNIA</p> <p align="center">County of Imperial</p> <p>I am a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk* of the printer of the</p> <p align="center">Imperial Valley Press</p> <p>a newspaper of general circulation, printed and published daily in the City of El Centro, County of Imperial and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Imperial, State of California, under the date of October 9, 1951, Case Number 26775; that the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:</p> <p>06/28 .</p> <p>all in the year <u>2018</u></p> <p>I certify (or declare) under penalty of perjury that the foregoing is true and correct.</p> <p align="center"> SIGNATURE</p> <p>Name of Account: I C AIR POLLUTION CONTROL Order Number: 11191906 Ad Number: 31420262</p> <p>* Printer, Foreman of the Printer, or Principal Clerk of the Printer Date: 28 th day of June, 2018. at El Centro, California.</p>	<p>This space is for the County Clerk's Filling Stamp:</p> <p align="center">RECEIVED JUL 02 2018 AIR POLLUTION CONTROL DISTRICT</p> <p>Proof of Publication of:</p> <p align="center">NOTICE OF AVAILABILITY OF THE DEMONSTRATION OF THE OCCURRENCE OF FIVE EXCEPTIONAL EVENTS (EE)</p> <p>The Imperial County Air Pollution Control District (Air District) has prepared five Draft Exceptional Event (EE) Demonstrations, which support the requested exclusion of measured 24-hour concentrations at the Air District air monitoring sites. Listed below by date, site and concentration as measured by a Federal Reference Method monitor (FRM) or with a continuous Federal Equivalent Method monitor (FEM) are the five Draft EE's.</p> <table border="0"> <tr> <td align="center" colspan="4">2015</td> <td align="center" colspan="4">2016</td> </tr> <tr> <td>November 02</td> <td></td> <td></td> <td></td> <td>July 30</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Westmorland</td> <td>FRM</td> <td>179</td> <td>ug/m3</td> <td>Brawley</td> <td>FEM</td> <td>195</td> <td>ug/m3</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>Calxico</td> <td>FEM</td> <td>158</td> <td>ug/m3</td> </tr> <tr> <td>November 25</td> <td></td> <td></td> <td></td> <td>El Centro</td> <td>FEM</td> <td>205</td> <td>ug/m3</td> </tr> <tr> <td>Niland</td> <td>FEM</td> <td>193</td> <td>ug/m3</td> <td>Niland</td> <td>FEM</td> <td>206</td> <td>ug/m3</td> </tr> <tr> <td>Brawley</td> <td>FEM</td> <td>215</td> <td>ug/m3</td> <td>Westmorland</td> <td>FEM</td> <td>201</td> <td>ug/m3</td> </tr> <tr> <td align="center" colspan="4">2016</td> <td align="center" colspan="4">August 09</td> </tr> <tr> <td>July 23 and July 24</td> <td></td> <td></td> <td></td> <td>Calxico</td> <td>FEM</td> <td>155</td> <td>ug/m3</td> </tr> <tr> <td>Calxico</td> <td>FEM</td> <td>195</td> <td>ug/m3</td> <td>El Centro</td> <td>FEM</td> <td>159</td> <td>ug/m3</td> </tr> <tr> <td>El Centro</td> <td>FEM</td> <td>203</td> <td>ug/m3</td> <td>Niland</td> <td>FEM</td> <td>167</td> <td>ug/m3</td> </tr> <tr> <td>Brawley</td> <td>FEM</td> <td>155</td> <td>ug/m3</td> <td>Westmorland</td> <td>FEM</td> <td>166</td> <td>ug/m3</td> </tr> <tr> <td>Calxico</td> <td>FEM</td> <td>194</td> <td>ug/m3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>El Centro</td> <td>FEM</td> <td>162</td> <td>ug/m3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Westmorland</td> <td>FEM</td> <td>164</td> <td>ug/m3</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>The public and all interested parties are encouraged to review and comment on the five Draft EE's listed above. These demonstrations provide the supporting evidence that on the days indicated for 2015 and 2016 Air District air monitors were affected by transported elevated levels of particulate matter of an aerodynamic size less than 10 microns (PM10). Winds, associated with a weather event suspended and transported PM10 into the region affecting areas within San Diego, Riverside, Yuma and Imperial counties. The five Draft EE's provide the scientific justification for the requested exclusions. The Air District is soliciting and accepting comments for 30 days commencing the date of the publication of this notice. The final closing date for submitting comments is July 30, 2018 by close of business.</p> <p>The five Draft EE's for days listed above are available for download at the Air District website at www.co.imperial.ca.us, under "Air Pollution". To view a hard copy of any of the eight Draft EE's, please visit the Air Pollution Control District office at 150 S. 9th Street, El Centro. Should you have any questions or concerns please feel free to call our office between 8am and 5pm at (442) 265-1800 and ask for Monica N. Soucier.</p> <p>L125 Jn28</p>	2015				2016				November 02				July 30				Westmorland	FRM	179	ug/m3	Brawley	FEM	195	ug/m3					Calxico	FEM	158	ug/m3	November 25				El Centro	FEM	205	ug/m3	Niland	FEM	193	ug/m3	Niland	FEM	206	ug/m3	Brawley	FEM	215	ug/m3	Westmorland	FEM	201	ug/m3	2016				August 09				July 23 and July 24				Calxico	FEM	155	ug/m3	Calxico	FEM	195	ug/m3	El Centro	FEM	159	ug/m3	El Centro	FEM	203	ug/m3	Niland	FEM	167	ug/m3	Brawley	FEM	155	ug/m3	Westmorland	FEM	166	ug/m3	Calxico	FEM	194	ug/m3					El Centro	FEM	162	ug/m3					Westmorland	FEM	164	ug/m3				
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Fig A-20: Is a copy of the Imperial County Air Pollution Control District official record (affidavit) affirming the publication of the notice of availability of the Exceptional Events Demonstration for July 30, 2016. The date for closing comments was July 30, 2018

FIGURE A-21
IMPERIAL COUNTY
COMMENTS REGARDING THE JULY 30, 2016 EE DEMONSTRATION

The ICAPCD did not receive any comments